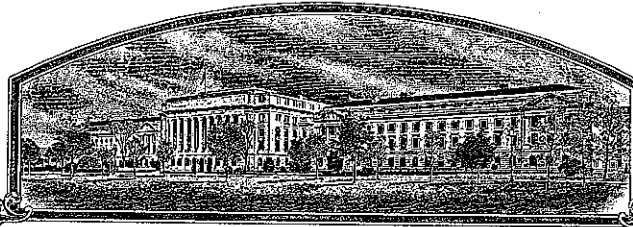


No.

9600384



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Pioneer Hi-Bred International, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

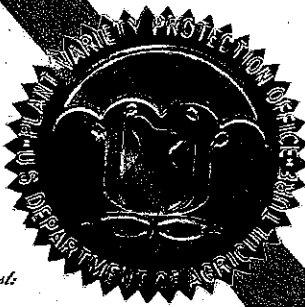
NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE FOREGOING PURPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT, (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'9245'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this fourteenth day of June, in the year of our Lord two thousand one.

Attest:



Alvin K. Post

Acting Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

W. H. H. H. H.

Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE DIVISION - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a).

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

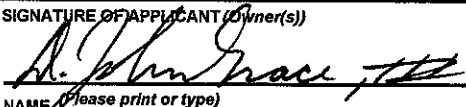
1. NAME OF APPLICANT(S) (as it is to appear on the Certificate)		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
Pioneer Hi-Bred International, Inc.			9245
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)		5. TELEPHONE (include area code)	FOR OFFICIAL USE ONLY PVPO NUMBER 9600384
700 Capital Square 400 Locust Street Des Moines, Iowa 50309		515/270-3582	
		6. FAX (include area code)	FILING DATE
		515/253-2288	Aug 30, 1996
7. GENUS AND SPECIES NAME	8. FAMILY NAME (Botanical)		FILING AND EXAMINATION FEE:
Glycine max L.	Luguminosae		\$2450.00
9. CROP KIND NAME (Common name)			DATE
Soybean			Aug 23, 1996
10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) (Common name)			CERTIFICATION FEE:
Corporation			320.00/100
11. IF INCORPORATED, GIVE STATE OF INCORPORATION		12. DATE OF INCORPORATION	DATE
Iowa		May 6, 1926	6/6/01
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS			(include area code)
John Grace 7300 NW 62nd Ave. P.O. Box 1004 Johnston, Iowa 50131-1004			515/270-3582
Debra Blair (Copy) 700 Capital Square 400 Locust St. Des Moines, Iowa 50309			15. FAX (include area code)
			515/253-2288
16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)			
a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of the Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Applicant's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,600 viable untreated seeds or, for tuber propagated varieties verification that tissue culture will be deposited and maintained in a public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2450), made payable to "Treasurer of the United States" (Mail to PVPO)			
17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED (See Section 83(a) of the Plant Variety Protection Act)?			
<input type="checkbox"/> YES If "yes," answer items 18 and 19 below <input checked="" type="checkbox"/> NO If "no," go to item (20)			
18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?		19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?	
<input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED	
20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?			
<input checked="" type="checkbox"/> YES (If "yes," give names of countries and dates) <input type="checkbox"/> NO			
U.S. - 1996			
21. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate			
The undersigned applicant(s) is/are the owner(s) of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.			
Applicant(s) is/are informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF APPLICANT (Owner(s))		SIGNATURE OF APPLICANT (Owner(s))	
			
NAME (Please print or type)		NAME (Please print or type)	
D. John Grace III			
CAPACITY OR TITLE	DATE	CAPACITY OR TITLE	DATE
Soybean Research Coordinator	8/20/96		

Exhibit A. Origin and Breeding History of the Variety**Soybean Variety 9245**

Variety 9245 evolved from a 1988 cross of A2396/9231

9245 is an F₃-derived variety which was advanced to the F₃ generation by modified single seed descent. The F₄ progeny row of 9245 was grown in the winter of 1989-90 in Puerto Rico. Subsequently, 9245 has undergone three years of testing and purification and has been observed by the breeder to be uniform and stable for all plant traits from generation to generation, with no evidence of variants. On the basis of yield performance and Phytophthora root rot resistance, variety 9245 was released for sale.

The purification block was grown and sublines homozygous for purple flower color, tawny pubescence color, black hila color, tan pods, and Phytophthora resistance were bulked for increase. Two acres of 9245 (breeders seed) were grown in the summer of 1992. Seventy acres of parent seedstock (foundation seed equivalent) were grown in the summer of 1994 and 2,908 bushels harvested. One thousand five hundred sixty-seven acres of parent seedstock (foundation seed equivalent) were grown in the summer of 1995 and 72,949 bushels harvested.

Exhibit B. Statement of Distinctness

Soybean Variety 9245

'9245' is most similar to '9231'; however, '9245' has allele B at the isozyme locus DIA, whereas '9231' has allele A.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SEED DIVISION - PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MARYLAND 20705

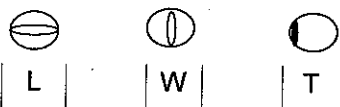
EXHIBIT C
(Soybean)

OBJECTIVE DESCRIPTION OF VARIETY
SOYBEAN (*Glycine max* L.)

NAME OF APPLICANT(S) Pioneer Hi-Bred International, Inc.	TEMPORARY DESIGNATION	VARIETY NAME 9245
ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code) 7300 N.W. 62nd Ave., P.O. Box 1004 Johnston, IA 50131-1004		FOR OFFICIAL USE ONLY PVPO NUMBER 9600384

Choose the appropriate response which characterizes the variety in the features described below. When the number of significant digits in your answer is fewer than the number of boxes provided, place a zero on the first box when number is 9 or less (e.g.,). Starred characters ★ are considered fundamental to an adequate soybean variety description. Other characters should be described when information is available.

1. SEED SHAPE:



1 = Spherical (L/W, L/T, and T/W ratios = < 1.2)
3 = Elongate (L/T ratio > 1.2; T/W = < 1.2)

2 = Spherical Flattened (L/W ratio > 1.2; L/T ratio = < 1.2)
4 = Elongate Flattened (L/T ratio > 1.2; T/W > 1.2)

★ 2. SEED COAT COLOR: (Mature Seed)

1 = Yellow 2 = Green 3 = Brown 4 = Black 5 = Other (Specify)

3. SEED COAT LUSTER: (Mature Hand Shelled Seed)

1 = Dull ('Corsoy 79'; 'Braxton') 2 = Shiny ('Nebsoy'; 'Gasoy 17')

★ 4. SEED SIZE: (Mature Seed)

Grams per 100 seeds

★ 5. HILUM COLOR: (Mature Seed)

1 = Buff 2 = Yellow 3 = Brown 4 = Gray 5 = Imperfect Black 6 = Black 7 = Other (Specify)

★ 6. COTYLEDON COLOR: (Mature Seed)

1 = Yellow 2 = Green

★ 7. SEED PROTEIN PEROXIDASE ACTIVITY:

1 = Low 2 = High

★ 8. SEED PROTEIN ELECTROPHORETIC BAND:

1 = Type A (SP1 a) 2 = Type B (SP1 b)

★ 9. HYPOCOTYL COLOR:

1 = Green only ('Evans'; 'Davis') 2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')
3 = Light Purple below cotyledons ('Beeson'; 'Pickett 71')
4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 266A')

★ 10. LEAFLET SHAPE:

1 = Lanceolate 2 = Oval 3 = Ovate 4 = Other (Specify)

4

Variety Name 9245

11. LEAFLET SIZE:

☐ 2

1 = Small ('Amsoy 71'; 'A5312')

2 = Medium ('Corsoy 79'; 'Gasoy 17')

3 = Large ('Crawford'; 'Tracy')

12. LEAF COLOR:

☐ 1

1 = Light Green ('Weber'; 'York')

2 = Medium Green ('Corsoy 79'; 'Braxton')

3 = Dark Green ('Gnome'; 'Tracy')

★ 13. FLOWER COLOR:

☐ 2

1 = White

2 = Purple

3 = White with purple throat

★ 14. POD COLOR:

☐ 1

1 = Tan

2 = Brown

3 = Black

★ 15. PLANT PUBESCENCE COLOR:

☐ 2

1 = Gray

2 = Brown (Tawny)

16. PLANT TYPES:

☐ 2

1 = Slender ('Essex'; 'Amsoy 71')

2 = Intermediate ('Amcor'; 'Braxton')

3 = Bushy ('Gnome'; 'Govan')

★ 17. PLANT HABIT:

☐ 3

1 = Determinate ('Gnome'; 'Braxton')

2 = Semi-Determinate ('Will')

3 = Indeterminate ('Nebsoy'; 'Improved Pelican')

★ 18. MATURITY GROUP:

☐ 0 ☐ 5

1 = 000

2 = 00

3 = 0

4 = I

5 = II

6 = III

7 = IV

8 = V

9 = VI

10 = VII

11 = VIII

12 = IX

13 = X

★ 19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

BACTERIAL DISEASES:

★ ☐ 0Bacterial Pustule (*Xanthomonas phaseoli* var. *sojensis*)★ ☐ 1Bacterial Blight (*Pseudomonas glycinea*)★ ☐ 0Wildfire (*Pseudomonas tabaci*)

FUNGAL DISEASES:

★ ☐ 1Brown Spot (*Septoria glycines*)Frogeye Leaf Spot (*Cercospora sojina*)★ ☐ 0

Race 1

☐ 0

Race 2

☐ 0

Race 3

☐ 0

Race 4

☐ 0

Race 5

☐

Other (Specify)

☐ 0Target Spot (*Corynespora cassicola*)☐ 0Downy Mildew (*Peronospora trifoliorum* var. *manshurica*)☐ 0Powdery Mildew (*Microspheera diffusa*)★ ☐ 0Brown Stem Rot (*Cephalosporium gregatum*)☐ 0Stem Canker (*Diaporthe phaseolorum* var. *caulivora*)

19. DISEASES REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant) (Continued)

FUNGAL DISEASES: (Continued)

- ★ ☐ 1 Pod and Stem Blight (*Diaporthe phaseolorum* var; *sojae*)
- ☐ 0 Purple Seed Stain (*Cercospora kikuchii*)
- ☐ 1 Rhizoctonia Root Rot (*Rhizoctonia solani*)
- Phytophthora Rot (*Phytophthora megasperma* var. *sojae*)
- ★ ☐ 2 Race 1 ☐ 2 Race 2 ☐ 2 Race 3 ☐ 2 Race 4 ☐ 2 Race 5 ☐ 0 Race 6 ☐ 2 Race 7
- ☐ 2 Race 8 ☐ 2 Race 9 ☐ 1 Other (Specify) 25

VIRAL DISEASES:

- ☐ 1 Bud Blight (Tobacco Ringspot Virus)
- ☐ 1 Yellow Mosaic (Bean Yellow Mosaic Virus)
- ★ ☐ 1 Cowpea Mosaic (Cowpea Chlorotic Virus)
- ☐ 1 Pod Mottle (Bean Pod Mottle Virus)
- ★ ☐ 1 Seed Mottle (Soybean Mosaic Virus)

NEMATODE DISEASES:

- Soybean Cyst Nematode (*Heterodera glycines*)
- ★ ☐ 0 Race 1 ☐ 0 Race 2 ☐ 1 Race 3 ☐ 0 Race 4 ☐ 1 Other (Specify) 14
- ☐ 0 Lance Nematode (*Hoplolaimus Colombus*)
- ★ ☐ 0 Southern Root Knot Nematode (*Meloidogyne incognita*)
- ★ ☐ 0 Northern Root Knot Nematode (*Meloidogyne Hapla*)
- ☐ 0 Peanut Root Knot Nematode (*Meloidogyne arenaria*)
- ☐ 0 Reniform Nematode (*Rotylenchulus reniformis*)
- ☐ OTHER DISEASE NOT ON FORM (Specify)

20. PHYSIOLOGICAL RESPONSES: (ENTER 0 = Not tested, 1 = Susceptible, 2 = Resistant)

- ★ ☐ 2 Iron Chlorosis on Calcareous Soil
- ☐ Other (Specify)

21. INSECT REACTION: (ENTER 0 = Not tested, 1 = Susceptible, 2 = Resistant)

- ☐ 0 Mexican Bean Beetle (*Epilachna Varivestis*)
- ☐ 0 Potato Leaf Hopper (*Empoasca fabae*)
- ☐ Other (Specify)

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Shape	9254	Seed Coat Luster	9255
Leaf Shape	9231	Seed Size	9234
Leaf Color	9255	Seed shape	9231
Leaf Size	9231	Seedling Pigmentation	9231

Variety Name 9245

23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY : Paired Comparison Data

VARIETY	NO. OF DAYS MATURITY	PLANT LODGING SCORE	CM PLANT HEIGHT	LEAFLET SIZE		SEED CONTENT		SEED SIZE G/100 SEED	NO. SEEDS POD
				CM Width	CM Length	% Protein	% Oil		
Submitted 9245	120.0	1.4	92			38.8	25.0	13.6	3
Name of Similar Variety A2506	121.9	1.5	86			41.1	22.5	13.8	3

PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
3. Hymowitz, T. 1973. Electrophoretic analysis of SBTI-A2 in the USDA soybean germplasm collection. Crop. Sci., 13: 420-421
4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1:1-19

Exhibit D. Additional Description of the Variety

Soybean Variety 9245

In Exhibit C we have identified variety 9245 as susceptible to bacterial blight, brown spot, pod and stem blight, rhizoctonia root rot, bud blight, yellow mosaic, cowpea mosaic, pod mottle and seed mottle.

This does not mean that variety 9245 is any worse for these problems than other varieties of similar maturity. Rather, we do not consider 9245 to be immune to these problems. Therefore, we have chosen to be conservative and have identified the line as "susceptible".

Variety 9245 is a mid group II variety. If group II maturities are divided into tenths, the relative maturity of 9245 is 2.4.

Table 1. Isozyme comparisons between Pioneer variety 9245 and competitor varieties for PVP application.

Variety	ACO2		ACO3		ACO4		ACP		DIA		ENP		IDH1		IDH2		MDH		MPI		PGM1		PHI	
	Allele 1	Allele 2	Allele 1	Allele 2	Allele 1	Allele 2	Allele A	Allele B	Allele A	Allele B	Allele A	Allele B	Allele 1	Allele 2	Allele 1	Allele 2	Allele A	Allele B	Allele A	Allele B	Allele 1	Allele 2	Allele 1	Allele 2
AgriPro AF1876	0	100	100	100	0	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0
AgriPro AP3355	0	100	100	100	0	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0
Asgrow A1862	0	100	100	40	0	60	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0
Asgrow A1900	0	100	100	0	0	100	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0
Asgrow A2234	0	100	100	0	0	100	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0
Asgrow A2506	100	0	100	100	0	0	100	100	0	100	0	100	100	0	100	0	100	0	100	0	100	0	100	0
Asgrow A2543	100	0	100	80	0	20	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0
Asgrow A2722	100	0	100	0	0	100	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0
Asgrow A2872	100	0	100	100	0	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0
Asgrow A3313	40	60	100	0	0	100	100	0	100	0	100	0	100	60	40	20	100	0	100	0	100	0	100	0
Dekalb CX298	100	0	100	100	0	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0
Dekalb CX329	0	100	100	100	0	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0
Illinois Foundation F2420	0	100	100	20	0	80	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0
Land O'Lakes L2233	0	100	100	0	0	100	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0
Land O'Lakes L2556	0	100	100	100	0	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0
Land O'Lakes L2771	0	100	100	100	0	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0
Pioneer 9231	100	0	100	0	0	100	100	0	100	0	100	0	100	0	100	60	100	0	100	0	100	0	100	0
Pioneer 9245	100	0	100	0	0	100	100	0	100	0	100	0	100	0	100	40	100	0	100	0	100	0	100	0
Pioneer 9281	100	0	100	100	0	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0
Silene 2571	0	100	100	0	0	100	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0	100	0

Exhibit E. Statement of the Basis of Applicant's Ownership**Soybean Variety 9245**

Variety 9245 was originated and developed by U.S. plant breeders from whom, by agreement, Pioneer Hi-Bred International, Inc. has obtained exclusive rights to variety 9245. No rights to variety 9245 are retained by the plant breeder or by any other party.